

## REMARKS

Claims 1-14, 16-19 and 23-25 are pending in this application. Attached hereto is a complete listing of all the claims, with their current status indicated parenthetically. By this Response, claims 1-14, 16-19 and 23-25 are cancelled without prejudice to later prosecution, and new claims 27-29 are presented.

In paragraph 7 of the Office Action, the Examiner states that claims 14, 19 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. In response, Applicant submits new claims 27-29. Claim 27 comprises claim 14 and its base claim (claim 1). Claim 28 comprises claim 19 and its base claim (claim 16), and claim 29 comprises claim 25 and its base claim (claim 23). For clarity, Applicant has substituted "a first base station" for "a primary source" and substituted "a second base station" for "a secondary source." This change is only for intelligibility, and has not been performed to distinguish the claims over any prior art. Therefore, Applicant submits that claims 27-29 are now allowable.

Also in paragraph 7, the Examiner states that claims 14, 19 and 25 (if combined with their respective base claims) are allowable because the combination of Shi and Shattil does not teach all the elements found in each of the claims.

However, for the purpose of establishing a non-ambiguous prosecution history, Applicant believes the Examiner's combination of Shi and Shattil is incorrect under 35 U.S.C. § 103(a). Specifically, if Shi were modified to include the teachings that the Examiner found in Shattil (an ultra-wideband communication system) the principal of operation of Shi would be changed, thus creating an inoperable combination.

Shi teaches methods and apparatus of adapting a threshold for channel handoff and channel switch in cellular communications (col. 2, lines 63-64). For example, one aspect of Shi is a method of handing off a cellular communication between a mobile unit and a cell within a

cellular network (col. 3, lines 15-18). Conventional cellular communication employs continuous sine waves that are transmitted at a specific frequency. In the United States, the Federal Communications Commission has limited cellular phone communications to the 800 to 900 MHz band.

The Examiner then states "Shi does not teach a method for performing a soft hand-off in an ultra-wideband cellular communication system." The Examiner then cites Shattil for teaching a soft hand-off in an ultra-wideband cellular communication system.

However, ultra-wideband (UWB) communication technology is vastly different than conventional communication technology that employs continuous sine waves. UWB (also known as "impulse radio") employs discrete pulses of electromagnetic energy that are emitted at nanosecond or picosecond intervals. Because the excitation pulse is not a modulated waveform, UWB has also been termed "carrier-free" in that no apparent carrier frequency is evident in the radio frequency (RF) spectrum. That is, the UWB pulses are transmitted without modulation onto a sine wave carrier frequency, in contrast with conventional radio frequency technology (i.e., Shi).

In summary, Shi uses conventional, continuous sinusoidal carrier waves at a specific frequency. The ultra-wideband technology taught in Shattil employs discrete pulses of electromagnetic energy that are emitted at nanosecond or picosecond intervals.

Clearly, these two technologies are as different as apples and oranges, and any attempted combination of the two results in an inoperable combination.

## Rejection Under 35 U.S.C. § 103(a)

In paragraphs 2-4 of the Office Action, the Examiner rejects claims 1-7, 11-13 16, 17, 23 and 24 under 35 U.S.C. §103(a) as unpatentable over Shi (U.S. Patent 6,507,740) in view of Shattil (U.S. Patent 6,686,879).

In paragraph 5 of the Office Action, the Examiner rejects claims 8 and 9 under 35 U.S.C. §103(a) as unpatentable over Shi (U.S. Patent 6,507,740) in view of Shattil (U.S. Patent 6,686,879), and further in view of Kong et al (U.S. Patent 6,473,619).

In paragraph 6 of the Office Action, the Examiner rejects claims 10 and 18 under 35 U.S.C. §103(a) as unpatentable over Shi (U.S. Patent 6,507,740) in view of Shattil (U.S. Patent 6,686,879), and further in view of Chheda (U.S. Patent 6,266,529).

The above rejections under 35 U.S.C. § 103(a) are now moot, as claims 1-7, 8, 9, 10, 11-13 16, 17, 18, 23, and 24 have been cancelled without prejudice to later prosecution.

## Conclusion

Applicant believes that this Response has addressed all items in the Office Action and now places the application in condition for allowance. Accordingly, favorable reconsideration and allowance of claims 27-29 at an early date is solicited. No fee is believed due with this response. Should any issues remain unresolved, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

  
Date

  
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